

## **ABSTRACT**

In an implementation of antenna assembly, an antenna element is formed with a front plate that has slots for wireless communication signal transfer, a dielectric material, a channel guide that is designed to confine the dielectric in a position that aligns the dielectric with the slots in the front plate, and a back plate. The front plate, channel guide, and back plate are attached together to enclose the dielectric within the channel guide to form an enclosed dielectric channel. An antenna assembly includes one or more of the antenna elements.